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Committee on the Peaceful Uses of Outer Space

Information furnished in conformity with the Convention on Registration of Objects Launched into Outer Space

Note verbale dated 5 June 2014 from the Permanent Mission of France to the United Nations (Vienna) addressed to the Secretary-General

The Permanent Mission of France to the United Nations (Vienna), in accordance with article IV of the Convention on Registration of Objects Launched into Outer Space (General Assembly resolution 3235 (XXIX), annex), has the honour to submit information on space objects launched by France between 1 January and 31 December 2013 (annex I), information on space objects registered by France that re-entered the Earth's atmosphere between 1 January and 31 December 2013 (annex II) and additional information on space objects registered by France as at 31 December 2013 (annex III).

The information in annex I includes registration information on 16 space objects, of which 8 are satellites (table 1) and 8 are launch vehicles (table 2) and information on satellites launched by France for foreign operators (table 3).

The Permanent Mission of France further has the honour to inform the Secretary-General that the French National Registry of Objects Launched into Outer Space contained 318 space objects as at 31 December 2013. Of those objects, 122 were satellites (of which 69 were operational) and 196 were component parts of launchers, such as launcher stages and carrier structures.

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Annex I

Information on space objects launched by France*

Table 1

Registration data on satellites launched by France between 1 January and 31 December 2013

Registration number	*Date of the launch*	*Launch site*	*Name of the launcher*	*Basic orbital characteristics*				*General function of the space object*	*Launch number*	*Remarks*	
				Nodal period (minutes)	*Inclination (degrees)*	*Apogee (km)*	*Perigee (km)*			*Satellites*	*State organization*
2013-005F	6 February 2013	Baikonur, Kazakhstan	Soyuz ST-A	114	52	1 414	1 413	Telecommunications satellite	-	Globalstar M095	France
2013-005E	6 February 2013	Baikonur, Kazakhstan	Soyuz ST-A	114	52	1 414	1 413	Telecommunications satellite	-	Globalstar M078	France
2013-005D	6 February 2013	Baikonur, Kazakhstan	Soyuz ST-A	114	52	1 414	1 413	Telecommunications satellite	-	Globalstar M096	France
2013-005C	6 February 2013	Baikonur, Kazakhstan	Soyuz ST-A	114	52	1 414	1 413	Telecommunications satellite	-	Globalstar M094	France
2013-005B	6 February 2013	Baikonur, Kazakhstan	Soyuz ST-A	114	52	1 414	1 413	Telecommunications satellite	-	Globalstar M093	France
2013-005A	6 February 2013	Baikonur, Kazakhstan	Soyuz ST-A	114	52	1 414	1 413	Telecommunications satellite	-	Globalstar M097	France
2013-022A	14 May 2013	Baikonur, Kazakhstan	Proton	1 436	0	35 798	35 776	Telecommunications satellite	-	EUTELSAT 3D	France
2013-044A	29 August 2013	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 792	35 782	Telecommunications satellite	A215	EUTELSAT 25B	France

* The data are reproduced in the form in which they were received.

Table 2

Registration data on other space objects launched by France between 1 January and 31 December 2013

Registration number	*Date of the launch*	*Launch site*	*Name of the launcher*	*Basic orbital characteristics*				*General function of the space object*	*Launch number*	*Remarks*	
				Nodal period (minutes)	*Inclination (degrees)*	*Apogee (km)*	*Perigee (km)*			*Launched space object*	*State/ organization*
2013-006C	7 February 2013	Kourou, French Guiana	Ariane 5 ECA	629	6	35 616	269	ESC-A cryogenic upper stage	A212	ESC-A	France
2013-006D	7 February 2013	Kourou, French Guiana	Ariane 5 ECA	583	6	33 253	249	SYLDA carrier structure	A212	SYLDA	France
2013-031E	25 June 2013	Kourou, French Guiana	Soyuz ST-B	276	0	7 692	7 663	Fregat stage	S05	Fregat	France
2013-038C	25 July 2013	Kourou, French Guiana	Ariane 5 ECA	591	4	33 696	202	SYLDA carrier structure	A214	SYLDA	France
2013-038D	25 July 2013	Kourou, French Guiana	Ariane 5 ECA	629	3	35 680	212	ESC-A cryogenic upper stage	A214	ESC-A	France
2013-044C	29 August 2013	Kourou, French Guiana	Ariane 5 ECA	631	4	35 742	263	ESC-A cryogenic upper stage	A215	ESC-A	France
2013-044D	29 August 2013	Kourou, French Guiana	Ariane 5 ECA	620	4	35 175	255	SYLDA carrier structure	A215	SYLDA	France
2013-074B	19 December 2013	Kourou, French Guiana	Soyuz ST-B	-	-	-	-	Fregat stage	S06	Fregat	France

Table 3

Space objects operated by foreign satellite operators that were launched by France between 1 January and 31 December 2013

Note: These space objects are not registered by France.

Registration number	*Date of the launch*	*Launch site*	*Name of the launcher*	*Basic orbital characteristics*				*General function of the space object*	*Launch number*	*Remarks*	
				Nodal period (minutes)	*Inclination (degrees)*	*Apogee (km)*	*Perigee (km)*			*Launched space object*	*State/ organization*
2013-006A	7 February 2013	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 807	35 767	Telecommunications satellite	A212	Amazonas 3	Brazil
2013-006B	7 February 2013	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 793	35 780	Telecommunications satellite	A212	Azerspace 1	Azerbaijan
2013-021A	7 May 2013	Kourou, French Guiana	Vettore Europeo di Generazione Avanzata (VEGA)	101	99	820	812	Observation satellite	V02	PROBA V	European Space Agency (ESA)
2013-021B	7 May 2013	Kourou, French Guiana	VEGA	98	98	684	683	Observation satellite	V02	VNREDSat 1	Viet Nam
2013-021C	7 May 2013	Kourou, French Guiana	VEGA	98	98	670	656	Electric solar sail	V02	ESTCube 1	Estonia
2013-027A	5 June 2013	Kourou, French Guiana	Ariane 5 ES	-	-	-	-	Automated Transfer Vehicle, re-entered 2 November 2013	A213	ATV-4	ESA
2013-031A	25 June 2013	Kourou, French Guiana	Soyuz ST-B	288	0	8 069	8 063	Telecommunications satellite	S05	O3b FM5	United Kingdom of Great Britain and Northern Ireland
2013-031B	25 June 2013	Kourou, French Guiana	Soyuz ST-B	288	0	8 069	8 063	Telecommunications satellite	S05	O3b FM4	United Kingdom
2013-031C	25 June 2013	Kourou, French Guiana	Soyuz ST-B	288	0	8 069	8 063	Telecommunications satellite	S05	O3b FM2	United Kingdom

Registration number	Date of the launch	Launch site	Name of the launcher	Basic orbital characteristics				General function of the space object	Launch number	Remarks	
				Nodal period (minutes)	Inclination (degrees)	Apogee (km)	Perigee (km)			Launched space object	State/ organization
2013-031D	25 June 2013	Kourou, French Guiana	Soyuz ST-B	288	0	8 069	8 063	Telecommunications satellite	S05	O3b PFM	United Kingdom
2013-038A	25 July 2013	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 794	35 779	Telecommunications satellite	A214	Alphasat I-4A F4	United Kingdom
2013-038B	25 July 2013	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 789	35 786	Telecommunications satellite	A214	Insat 3D	India
2013-014B	29 August 2013	Kourou, French Guiana	Ariane 5 ECA	1 436	0	35 824	35 748	Telecommunications satellite	A215	GSAT 7	India
2013-074A	19 December 2013	Kourou, French Guiana	Soyuz ST-B	-	-	-	-	Scientific satellite	S06	Gaia	ESA

Annex II

Information provided by France in conformity with article IV, paragraph 3, of the Convention on Registration of Objects Launched into Outer Space on space objects registered by France that re-entered the Earth's atmosphere between 1 January and 31 December 2013*

Registration number	*Date of the launch*	*General function of the space object*	*Date of atmospheric re-entry*
2012-022D	20 May 2011	Ariane 5 SYLDA	21 January 2013
1999-009C	20 February 1999	Ariane 4 stage	11 February 2013
2007-007D	11 March 2007	Ariane 5 SYLDA	6 April 2013
2007-056D	14 November 2007	Ariane 5 SYLDA	20 September 2013

* The registration data are reproduced in the form in which they were received.

Annex III

Additional information provided by France in conformity with article IV, paragraph 2, of the Convention on Registration of Objects Launched into Outer Space on space objects registered by France as at 31 December 2013*

Table 1
French satellites in a low-Earth orbit and still operational

No	*Registration number*	*Satellite*	*Type of orbit*
1	2002-021A	SPOT 5 Earth observation satellite	820 km Sun-synchronous orbit
2	2004-049A	Helios 2A space observation satellite	Polar orbit
3	2006-016B	Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observation (CALIPSO) satellite for three-dimensional characterization of clouds and aerosols	700 km polar orbit
4	2006-063A	Convection, Rotation and Planetary Transits (COROT) satellite for the study of stars and exoplanet detection	896 km polar orbit inclined at 90°
5	2008-032A	French-American Jason-2 oceanography satellite	1 330 km orbit inclined at 66°
6	2009-073A	Helios 2B space observation satellite	Polar orbit
7	2010-028A	Picard microsatellite for solar research	730 km polar orbit
8	2010-054A	Globalstar M079 communications satellite	1 400 km orbit inclined at 52°
9	2010-054B	Globalstar M074 communications satellite	1 400 km orbit inclined at 52°
10	2010-054C	Globalstar M076 communications satellite	1 400 km orbit inclined at 52°
11	2010-054D	Globalstar M077 communications satellite	1 400 km orbit inclined at 52°
12	2010-054E	Globalstar M075 communications satellite	1 400 km orbit inclined at 52°
13	2010-054F	Globalstar M073 communications satellite	1 400 km orbit inclined at 52°
14	2011-033A	Globalstar M083 communications satellite	1 400 km orbit inclined at 52°
15	2011-033B	Globalstar M088 communications satellite	1 400 km orbit inclined at 52°
16	2011-033C	Globalstar M091 communications satellite	1 400 km orbit inclined at 52°
17	2011-033D	Globalstar M085 communications satellite	1 400 km orbit inclined at 52°
18	2011-033E	Globalstar M081 communications satellite	1 400 km orbit inclined at 52°
19	2011-033F	Globalstar M089 communications satellite	1 400 km orbit inclined at 52°
20	2011-076A	ELISA W11 listening system microsatellite	Polar orbit
21	2011-076B	ELISA E24 listening system microsatellite	Polar orbit

* The registration data are reproduced in the form in which they were received.

No.	*Registration number*	*Satellite*	*Type of orbit*
22	2011-076C	ELISA W23 listening system microsatellite	Polar orbit
23	2011-076D	ELISA E12 listening system microsatellite	Polar orbit
24	2011-076F	Pleiades 1A Earth observation satellite	700 km polar orbit
25	2011-080A	Globalstar M084 communications satellite	1 400 km orbit inclined at 52°
26	2011-080B	Globalstar M080 communications satellite	1 400 km orbit inclined at 52°
27	2011-080C	Globalstar M082 communications satellite	1 400 km orbit inclined at 52°
28	2011-080D	Globalstar M092 communications satellite	1 400 km orbit inclined at 52°
29	2011-080E	Globalstar M090 communications satellite	1 400 km orbit inclined at 52°
30	2011-080F	Globalstar M086 communications satellite	1 400 km orbit inclined at 52°
31	2012-047A	SPOT 6 Earth observation satellite	700 km polar orbit
32	2012-068A	Pleiades 1B Earth observation satellite	700 km polar orbit
33	2013-005A	Globalstar M097 communications satellite	1 400 km orbit inclined at 52°
34	2013-005B	Globalstar M093 communications satellite	1 400 km orbit inclined at 52°
35	2013-005C	Globalstar M094 communications satellite	1 400 km orbit inclined at 52°
36	2013-005D	Globalstar M096 communications satellite	1 400 km orbit inclined at 52°
37	2013-005E	Globalstar M078 communications satellite	1 400 km orbit inclined at 52°
38	2013-005F	Globalstar M095 communications satellite	1 400 km orbit inclined at 52°

Table 2
French satellites in geostationary orbit and still operational

No.	*Registration number*	*Satellite*	*Orbital position*
1.	1996-067A	EUTELSAT 48A telecommunications satellite (formerly W48, Eurobird™ 9, Hot Bird™ 2)	48° E
2.	1998-013A	EUTELSAT 16B telecommunications satellite (formerly Eurobird™ 16, Hot Bird™ 4)	16° E
3.	1999-018A	EUTELSAT 21A telecommunications satellite (formerly W6, W3), redeployed and renamed EUTELSAT 48C in 2013	48° E
4.	2000-019A	EUTELSAT 16C telecommunications satellite (formerly SESAT 1)	16° E
5.	2000-028A	EUTELSAT 36A telecommunications satellite (formerly W4)	36° E
6.	2001-011A	EUTELSAT 28A telecommunications satellite (formerly Eurobird™ 1)	28.5° E
7.	2001-042A	EUTELSAT 8 West A telecommunications satellite (formerly Atlantic Bird™ 2)	8° W
8.	2002-035A	EUTELSAT 5 West A telecommunications satellite (formerly Atlantic Bird™ 3)	5° W
9.	2002-038A	EUTELSAT Hot Bird™ 13A telecommunications satellite (formerly Hot Bird™ 6), redeployed and renamed EUTELSAT 8 West C in 2013	7.5° E
10.	2002-040A	EUTELSAT 12 West A telecommunications satellite (formerly Atlantic Bird™ 1)	12.5° W
11.	2002-051A	EUTELSAT 70A telecommunications satellite (formerly W5), redeployed and renamed EUTELSAT 25C then EUTELSAT 33B in 2013	33.1° E
12.	2003-043A	EUTELSAT 33A telecommunications satellite (formerly Eurobird™ 3, eBird™)	33° E
13.	2004-008A	EUTELSAT 7A telecommunications satellite (formerly W3A)	7° E
14.	2005-041B	Syracuse 3A telecommunications satellite	47° E
15.	2006-007B	EUTELSAT 9A telecommunications satellite (formerly Eurobird™ 9A, Hot Bird™ 7A)	9° E
16.	2006-032A	EUTELSAT Hot Bird™ 13B telecommunications satellite (formerly Hot Bird™ 8)	13° E
17.	2006-033B	Syracuse 3B telecommunications satellite	5° W
18.	2008-065A	EUTELSAT Hot Bird™ 13C telecommunications satellite (formerly Hot Bird™ 9)	13° E
19.	2008-065B	EUTELSAT 28B telecommunications satellite (formerly EUTELSAT 48B, W2M)	28.5° E
20.	2009-008B	EUTELSAT 3C telecommunications satellite (formerly Atlantic Bird™ 4A, Hot Bird™ 10), redeployed and renamed EUTELSAT Hot Bird™ 13D in 2013	13° E
21.	2009-016A	EUTELSAT 10A telecommunications satellite (formerly W2A)	10° E
22.	2009-065A	EUTELSAT 36B telecommunications satellite (formerly W7)	36° E
23.	2010-069A	EUTELSAT KA-SAT 9A telecommunications satellite (formerly KA-SAT)	9° E
24.	2011-051A	EUTELSAT 7 West A telecommunications satellite (formerly Atlantic Bird™ 7)	7° W
25.	2011-057A	EUTELSAT 16A telecommunications satellite (formerly W3C)	16° E
26.	2012-062B	EUTELSAT 21B telecommunications satellite (formerly W6A)	21.5° E

No	*Registration number*	*Satellite*	*Orbital position*
27	2012-069A	EUTELSAT 70B telecommunications satellite (formerly W5A)	70.5° E
28	2013-022A	EUTELSAT 3D telecommunications satellite (formerly W3D)	3.1° E
29	2012-069A	EUTELSAT 25B telecommunications satellite (formerly EB 2A)	25.5° E

Table 3
French satellites still in orbit but no longer operational

No.	*Registration number*	*Satellite*	*Orbit*
1.	1965-096A	A1 experimental satellite (Astérix)	Low-Earth orbit (LEO)
2.	1965-101A	FR1 technological satellite	LEO
3.	1966-013A	Diapason D1 experimental satellite	LEO
4.	1967-011A	Diadème 1 experimental satellite	LEO
5.	1967-014A	Diadème 2 experimental satellite	LEO
6.	1971-071A	Eole 1 (CAS-A) experimental data-collection satellite	LEO
7.	1974-101A	Symphonie 1 experimental telecommunications satellite	Geostationary Earth orbit (GEO)
8.	1975-010A	Starlette scientific satellite	LEO
9.	1975-077A	Symphonie 2 experimental telecommunications satellite	GEO
10.	1983-058A	EUTELSAT I-F1 (ECS 1) telecommunications satellite (European Space Agency (ESA))	GEO
11.	1984-081A	EUTELSAT I-F2 (ECS 2) tel. communications satellite (ESA)	GEO
12.	1984-081B	Telecom 1A telecommunications satellite	GEO
13.	1985-035B	Telecom 1B telecommunications satellite	GEO
14.	1986-019A	SPOT 1 Earth observation satellite (deorbiting manoeuvres effected in November 2003 to lower the satellite's perigee to below 600 km with a view to achieving re-entry within 25 years)	LEO
15.	1987-078B	EUTELSAT I-F4 (ECS 4) telecommunications satellite	GEO
16.	1988-018B	Telecom 1C telecommunications satellite	GEO
17.	1988-063B	EUTELSAT I-F5 (ECS 5) telecommunications satellite (ESA)	GEO
18.	1988-098A	TDF1 live television satellite	GEO
19.	1990-005A	SPOT 2 Earth observation satellite (final deorbiting manoeuvres effected on 29 July 2009 to lower the satellite's perigee to below 600 km with a view to achieving re-entry within 25 years)	LEO
20.	1990-063A	TDF2 live television satellite	GEO
21.	1990-079B	EUTELSAT II-F1 telecommunications satellite	GEO
22.	1991-003B	EUTELSAT II-F2 telecommunications satellite	GEO
23.	1991-050E	Satellite for Amateur Radio Astronomy (SARA) experimental microsatellite	LEO
24.	1991-083A	EUTELSAT II-F3 telecommunications satellite	GEO
25.	1991-084A	Telecom 2A telecommunications satellite	GEO

No.	*Registration number*	*Satellite*	*Orbit*
26.	1992-021A	Telecom 2B telecommunications satellite	GEO
27.	1992-041B	EUTELSAT II-F4 telecommunications satellite	GEO
28.	1992-052C	S80/T technological satellite	LEO
29.	1993-031B	ARSENE amateur radio satellite (perigee ~17 000 km)	Geostationary transfer orbit (GTO)
30.	1993-061A	SPOT 3 Earth observation satellite (orbit >800 km)	LEO
31.	1993-061B	Stella scientific satellite (orbit 800 km)	LEO
32.	1995-016B	Hot Bird™ 1 (EUTELSAT II-F6) telecommunications satellite	GEO
33.	1995-033A	Helios 1A space observation satellite (deactivated in February 2012 following deorbiting manoeuvres)	LEO
34.	1995-033B	Cerise research satellite (orbit ~600 km)	LEO
35.	1995-067A	Telecom 2C telecommunications satellite	GEO
36.	1996-044B	Telecom 2D telecommunications satellite (deactivated in November 2012 following deorbiting manoeuvres)	GEO
37.	1997-049A	W75 telecommunications satellite (formerly Eurobird™ 4, Hot Bird™ 3) (deactivated in July 2011 following deorbiting manoeuvres)	GEO
38.	1998-017A	SPOT 4 Earth observation satellite, 820 km Sun-synchronous orbit (ceased operating on 29 June 2013)	LEO
39.	1998-056A	EUTELSAT W2 telecommunications satellite (deactivated in March 2010 following deorbiting manoeuvres)	GEO
40.	1998-057A	EUTELSAT 25A telecommunications satellite (formerly Eurobird™ 2, Hot Bird™ 5), redeployed and renamed EUTELSAT 4B in 2013 (ceased operating in September 2013 following deorbiting manoeuvres)	GEO
41.	1999-064A	Helios 1B observation satellite (withdrawn from service on 21 October 2004 with a perigee of ~630 km)	LEO
42.	1999-064B	Clémentine experimental satellite (perigee ~600 km)	LEO
43.	2000-052A	Eurobird™ 4A telecommunications satellite (formerly W1) (deactivated in February 2012 following deorbiting manoeuvres)	GEO
44.	2001-055A	French-American Jason-1 oceanography satellite, 1 300 km orbit inclined at 66° (mission ended on 3 July 2013)	LEO
45.	2002-021B	Idefix amateur radio satellite (attached to third stage of Ariane 4-V151 launcher, orbit ~800 km)	LEO
46.	2004-025C	DEMETER scientific microsatellite (scientific use terminated in December 2010, deactivated in February 2011, orbit 650 km)	LEO

No.	*Registration number*	*Satellite*	*Orbit*
47.	2004-049C	Essaim 1 satellite for characterization of Earth's electromagnetic environment (ceased operating in October 2010; re-entry in less than 25 years)	LEO
48.	2004-049D	Essaim 2 satellite for characterization of Earth's electromagnetic environment (ceased operating in October 2010; re-entry in less than 25 years)	LEO
49.	2004-049E	Essaim 3 satellite for characterization of Earth's electromagnetic environment (ceased operating in October 2010; re-entry in less than 25 years)	LEO
50.	2004-049F	Essaim 4 satellite for characterization of Earth's electromagnetic environment (ceased operating in October 2010; re-entry in less than 25 years)	LEO
51.	2004-049G	Polarization and Anisotropy of Reflectances for Atmospheric Sciences coupled with Observations from a Lidar (PARASOL) microsatellite for characterization of the radiative and microphysical properties of clouds and aerosols, 700 km polar orbit (ceased operating on 18 December 2013)	LEO
52.	2009-008C	SPIRALE A experimental satellite (deactivated at the beginning of 2011)	GTO
53.	2009-008D	SPIRALE B experimental satellite (deactivated at the beginning of 2011)	GTO
54.	2010-056A	EUTELSAT W3B telecommunications satellite (failed launch into geostationary orbit, remains in GTO)	GTO
55.	2012-006H	Radiation On Bipolar for University Satellite Test Application (ROBUSTA) CubeSat (satellite lost shortly after launch)	LEO